

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 April 2005 (28.04.2005)

PCT

(10) International Publication Number
WO 2005/038271 A1

(51) International Patent Classification⁷: **F15D 1/06**, 1/12

(74) Agent: **HERDEN, Andreas**; Blumbach, Zinngrebe,
Alexandrastrasse 5, 65187 Wiesbaden (DE).

(21) International Application Number:
PCT/EP2004/011227

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 7 October 2004 (07.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
103 47 022.0 7 October 2003 (07.10.2003) DE
PCT/EP04/002912 19 March 2004 (19.03.2004) DE

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant and

(72) Inventor: **VIDA, Nikolaus** [DE/DE]; Am Grabenweg 2,
72516 Scheer (DE).

(72) Inventors; and

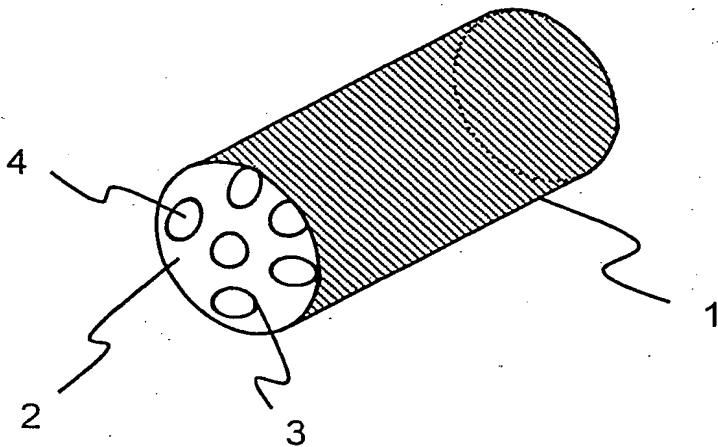
(75) Inventors/Applicants (*for US only*): **KIKNADZE, Gennady, Iraklievich** [RU/RU]; Marshall Riebalko Street N° 16, Building 5, Flat 2, Moskau 123436 (RU). **GACHECHILADZE, Ivan, Alexandrovich** [RU/RU]; Astrachanski Street No. 5, Flat 96, Moskau 129010 (RU).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SURFACE WITH REDUCED PARTICLE DEPOSITION AND REDUCED ICE FORMATION



(57) Abstract: The invention relates in general to surfaces along which media, e.g. gases, liquids or multi-phase mixtures are flowing, especially to a device for transportation of a flowing medium and/or for heat exchange between a flowing medium and the device and also to the application of such devices. For reducing particle deposition and ice formation on a surface along which a medium flows, the invention proposes a surface with dimples, the edges of which are rounded, thereby forming a central dimple area and at least one curvature area for each dimple, which continuously connects the dimple to the surrounding surface. The invention further proposes a layer comprising the surface, methods for producing the surface and also the application of a device provided with such surface in an air-conditioning system.